

# Statement of Basis

**for the**

Proposed Clean Air Act Permit  
to Construct Cabrillo Port

**Prepared by**



**The United States  
Environmental Protection Agency  
Region 9**

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**May 2006**

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## **Acronyms and Abbreviations**

ATC	Authority to Construct
BACT	Best Available Control Technology
BHP	brake horse power
BHPB	BHP Billiton LNG International, Inc.
BOG	boil off gas
BTU	British thermal unit
CAA	Clean Air Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CSLC	California State Lands Commission
DPA	Deepwater Port Act
EFH	essential fish habitat
EIR	environmental impact report
EIS	environmental impact statement
ESA	Endangered Species Act
FSRU	floating storage and re-gasification unit
HAP	hazardous air pollutants
lbs	pounds
LNG	liquefied natural gas
NEPA	National Environmental Policy Act
MARAD	US Maritime Administration
MM	million
NAAQS	National Ambient Air Quality Standards
NOAA	National Oceanic and Atmospheric Administration
NSPS	New Source Performance Standards
NSR	New Source Review
OCD	offshore and coastal dispersion
psia	pound per square inch actual
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
ROD	record of decision
SCR	selective catalytic reduction
SCV	submerged combustion vaporizer
SIP	State Implementation Plan
tpy	tons per year
FWS	US Fish and Wildlife Service
VCAPCD	Ventura County Air Pollution Control District

## **1.0 INTRODUCTION**

On December 30, 2003, BHP Billiton LNG International, Inc. (BHPB) submitted an application for an air permit to construct Cabrillo Port, a new offshore liquefied natural gas (LNG) terminal off the coast of Ventura County, California. Subsequent to the initial submittal, the permit application was revised and resubmitted in December 2005. This document sets forth the legal and factual basis for the draft permit and its conditions, which are based on the December, 2005 application (supplemented by BHPB's submissions on April 21, 14, 11, and 7, 2006; and June 7, 2005). It describes the general project, air emission units, air pollution control equipment, overall air quality impacts, and regulatory requirements.

Note: The Deepwater Port Act (DPA) of 1974, as amended by the Maritime Transportation Security Act of 2002, provides for the licensing of oil and natural gas deepwater ports in maritime waters by the Secretary of Transportation, and requires the approval of the governor of the adjacent coastal State in the processing of each deepwater port license application. The Secretary of Transportation has delegated the responsibility to regulate deepwater ports to the United States Coast Guard (Coast Guard) and the Maritime Administration (MARAD). Pursuant to a memorandum of agreement, the Coast Guard, MARAD, and the California State Lands Commission (CSLC) have prepared a joint environmental impact statement/environmental impact report (EIS/EIR) to satisfy the requirements of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The initial draft EIS/EIR was subject to public review in October 2004 and a revised draft EIR was issued in March 2006. For more information regarding the EIS/EIR and the licensing requirements under the DPA, see the Coast Guard's Web site at <http://www.uscg.mil/hq/g-m/mso/mso5.htm>, the U.S. Department of Transportation's Docket Management System at <http://dms.dot.gov/>, or the CSLC's Web site for Cabrillo Port at <http://www.cabrilloport.ene.com/default.htm>. Regulations concerning the deepwater port licensing process, including pre-construction, design, construction, and equipment and deepwater port operations, can be found at 33 CFR Parts 148, 149 and 150.

## **2.0 PROJECT OVERVIEW**

### **2.1 APPLICANT**

BHP Billiton LNG International, Inc.  
1360 Post Oak Boulevard, Suite 150  
Houston, TX 77056-3020

### **2.2 PROJECT DESCRIPTION**

Cabrillo Port consists of a floating storage and re-gasification unit (FSRU) connected to two new parallel subsea pipelines. The FSRU is a ship-shaped, double-sided, double-bottom facility that will be permanently moored to the ocean floor at the bow. The equipment on the FSRU will include eight submerged combustion vaporizers (SCVs),

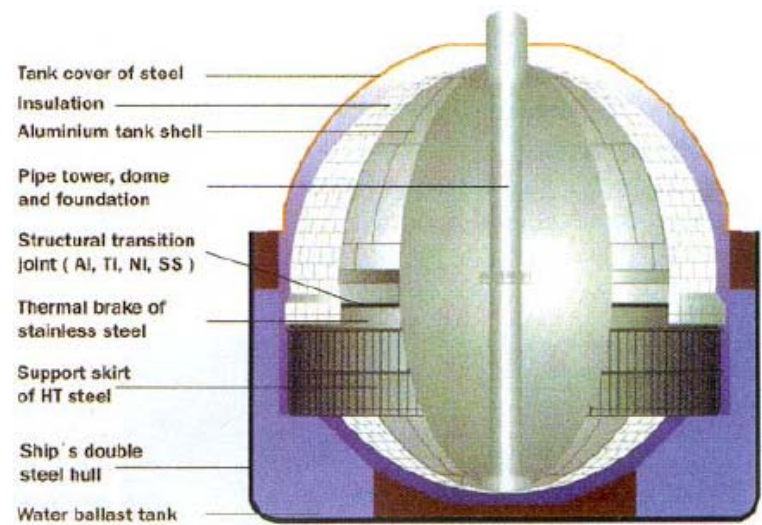
four engines for electric power generation (three primary engines and one backup), three spherical LNG storage tanks, one diesel fuel storage tank, an emergency generator engine, and three emergency firewater pump engines.

LNG containing about 99.7% methane and less than 1 ppmv sulfur will be shipped to the FSRU at approximately -260° F in specially designed double-hull ships from overseas. An LNG receiving system onboard the FSRU will assist in the transfer of LNG to the storage tanks (see Figure 1) for holding prior to re-gasification in the SCVs. The tanks will have a total storage capacity of 9,640,904 ft<sup>3</sup> and will not be mechanically refrigerated.

The insulation on the tanks will be designed to allow a boil off of approximately 0.12% per day; this boil off gas (BOG) will be used as fuel for the SCVs at all times and for the main generators and backup generator during normal operations. Excess BOG will be sent out through the natural gas send-out line.

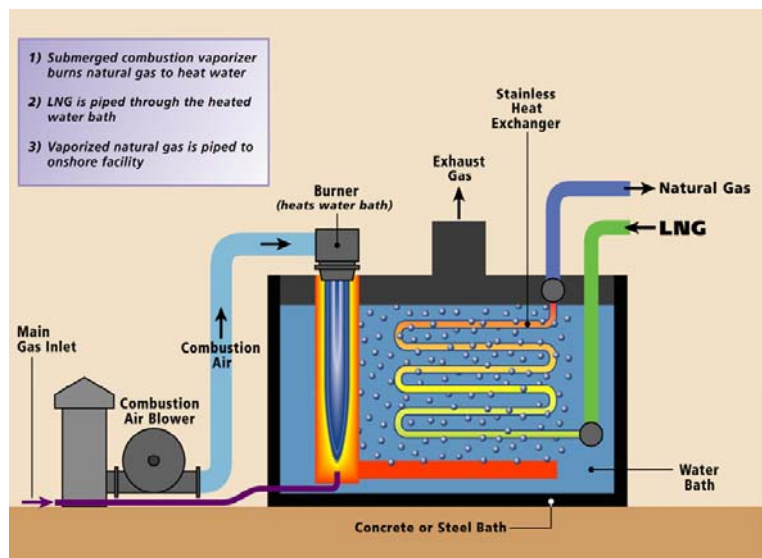
Re-gasification of the LNG into natural gas will take place in the vaporization portion of the process (see Figure 2). Although the process will consist of eight SCVs, the system will only operate at 50% capacity at any one time. Once re-gasified, the natural gas will be transported to the onshore transmission system by the subsea pipeline. The gas pipelines will make landfall adjacent to the Southern California Gas Company's Ormond

**Figure 1: LNG Storage Tank**



Source: December, 2005 application for minor New Source Review construction permit

**Figure 2: Submerged Combustion Vaporizer**



Source: Modified after Sumitomo Precision Products

Beach Metering Station. From the metering station, natural gas will be transported in the existing onshore natural gas transmission systems. The FSRU will be able to re-gasify up to 1.5 billion ft<sup>3</sup> of LNG per day.

In a June 7, 2005 letter, BHPB stated its intent to take several measures to minimize the impact of the emissions from the operation of the facility and enhance local air quality. The letter was submitted as an addendum to the permit application and represents a firm commitment on BHPB's part to, among other things, control the stationary source emissions using technologies that are consistent with a BACT analysis it prepared and submitted with the permit application. Table 1 summarizes the proposed control measures, which are based on the BACT analysis included in the December, 2005 application.

<b>Table 1</b> <b>Summary of Proposed Emission Control Measures</b>					
<b>Equipment Description</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>ROC</b>
Wartsila 9L50DF generator engines	Selective catalytic reduction	Oxidation catalyst	Use of natural gas as primary fuel	Use of natural gas as primary fuel	Oxidation catalyst
			Use of ultra-low sulfur diesel <sup>1</sup> as secondary fuel	Use of ultra-low sulfur diesel as secondary fuel	
SCVs	Low NOx burners	Good combustion practices	Use of natural gas	Use of natural gas	Good combustion practices
Emergency generator and firewater pumps	Use of Tier 2 engines	Use of Tier 2 engines	Use of ultra-low sulfur diesel	Use of ultra-low sulfur diesel	Use of Tier 2 engines

Installation and commissioning of the equipment and control systems will be performed prior to mooring of the FSRU at its permanent location. However, the FSRU will undergo a 60-day initial startup period to test the emergency equipment and otherwise prepare for steady state operation. With the exception of use of natural gas, all emission control measures will be employed during the initial startup period. Prior to receipt of the first LNG shipment, electric power will be supplied to the FSRU by operation of the Wartsila 9L50DF generator engines on diesel fuel. No more than two engines will operate simultaneously during this period and the SCR systems will be operational. Use of diesel as the primary fuel in the generators will be discontinued upon receipt of the first LNG shipment and the start of BOG service to the FSRU.

Diesel fuel will also be used for certain purposes after the initial startup period. Its primary use will be to operate the emergency generator, firewater pumps, and lifeboats in

<sup>1</sup> Maximum sulfur content of 15 ppmw

the event of an emergency resulting in the failure of normal BOG service to the FSRU. The 9L50DF generators will also be capable of operating on diesel fuel in emergencies and other situations resulting in the loss of natural gas service. Use of diesel fuel in the 9L50DF generators will be limited to 48,417 gallons per year (equivalent to 100 hours of operation per year).

The diesel fuel storage tank will be loaded with diesel fuel prior to departure from the fabrication shipyard and will be topped off approximately once per year. Diesel fuel will be brought on board in re-useable transportable containers; the fuel will be transferred into the storage tank, and the empty containers will be transferred back to shore. All diesel fuel used will have a maximum sulfur content of 15 ppmw.

In addition to emissions from equipment onboard the FSRU, air emissions will be generated by marine vessels that service the facility. Specifically, the mobile source marine vessels associated with operation of the FSRU include one LNG carrier<sup>2</sup>, two tug/supply boats, one crew boat, and three emergency lifeboats.

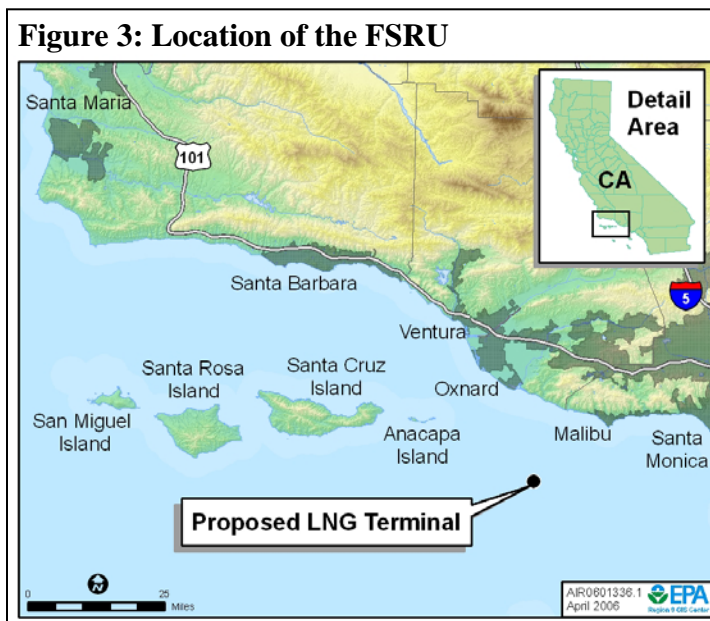
Each LNG carrier berthing, unloading, and de-berthing event will take approximately 20 hours and will occur about three times per week. The LNG carriers are not expected to enter District waters (3 miles from the Ventura County shoreline). The tug/supply boats will operate once a week to bring supplies to the FSRU and haul waste back to the shore for disposal. These boats will also assist in berthing of the LNG carriers. The crew boat will conduct approximately 3.5 round trips between the shore and the FSRU per week.

The project also includes specific air quality improvement projects that are discussed in Section 5.3 below.

## 2.3 PROJECT LOCATION

The FSRU will be moored approximately 14 miles off the shore of mainland Ventura County, California, and 18 miles from Anacapa Island (see Figure 3). The exact latitude and longitude of this location are:

Latitude: 33 51.518 N  
Longitude: 119 02.015 W



<sup>2</sup> One LNG carrier will dock at the FSRU at any given time but the facility may be serviced by more than a single vessel.

### **3.0 AIR EMISSIONS**

#### **3.1 SOURCES OF AIR EMISSIONS**

Air emissions associated with this project include those generated from construction activities, operation of the stationary equipment onboard the FSRU, and operation of marine vessels that service the facility. These sources are described or listed in more detail below.

##### **3.1.1 Construction Activities**

Construction activities associated with this project will generate emissions of regulated pollutants. Specific activities that will result in emissions include:

- Installation of the mooring and tie-in of the FSRU,
- Installation of offshore pipelines,
- Drilling of a shoreline pipeline crossing and pipeline installation at Ormond Beach in Ventura County, and
- Installation of onshore pipelines.

The emissions will consist of NO<sub>x</sub>, CO, PM<sub>10/2.5</sub>, ROC, and SO<sub>2</sub>, and will be generated primarily from fuel combustion in the pipe laying vessel, assist boat engines, and the onshore drilling rig and trenching construction equipment. The emissions associated with construction activities are not subject to stationary source permitting requirements. However, they are addressed in the CEQA/NEPA process. More information related to these construction emissions can be found in the CEQA/NEPA environmental documents available on the CSLC, Department of Transportation, and Coast Guard Web sites provided in Section 1.0.

##### **3.1.2 Stationary Equipment**

The permitted emission units onboard the FSRU include the following pieces of equipment. The Unit ID Numbers are those referenced in the draft permit.

<b>Table 2</b>	
<b>List of Permitted Emission Units Onboard the FSRU</b>	
<b>Unit ID Number</b>	<b>Description</b>
D1, D2, D3, D4, D5, D6, D7, D8	8 submerged combustion vaporizers, Sela Fluid Processing Corporation model Sub-XLE, natural gas fueled, rated at 155 MMBtu/hr each
D9, D10, D11, D12	4 generator engines, Wartsila model 9L50DF, dual fueled (natural gas and diesel), four-stroke, lean-burn, spark-ignited, rated at 8,250 kW each
D13	1 emergency standby engine, diesel fueled, rated at 4,200 kW
D14, D15, D16	3 emergency firewater pumps, diesel fueled, rated at 600 kW each

D17	1 diesel fuel storage tank, 145,000 gallons, fixed roof
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### 3.1.3 Marine Vessels

Emissions will be generated by vessels that service the FSRU. These vessels include the following:

- One LNG carrier with engines rated at 60,000 brake horse power (BHP),
- Two tug/supply boats with engines rated at 15,000 BHP each,
- One crew boat with an engine rated at 1,500 BHP, and
- Three emergency lifeboats rated at 75 BHP each.

## 3.2 AIR POLLUTION CONTROL TECHNOLOGIES

Operation of the FSRU will generate emissions of NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, ROC, and HAPs. As discussed above, the Applicant has committed to minimize these emissions by using control technologies that were selected using the District's and EPA's BACT procedures.

### *Nitrogen Oxides*

Units D9-D12 will be equipped with selective catalytic reduction (SCR) systems for the control of nitrogen oxides. The SCR process works by injecting ammonia into the exhaust gas from the engines so that it reacts with the NO<sub>x</sub> (NO and NO<sub>2</sub>) emissions in the exhaust in the presence of a catalyst to form nitrogen (N<sub>2</sub>) and water. The ammonia is injected into the system in proportion to the NO<sub>x</sub> in the exhaust to optimize NO<sub>x</sub> reduction while minimizing releases of ammonia, or "ammonia slip." Ammonia slip in SCR systems can range from 5 to 20 ppm. Condition V.C.1 limits the ammonia emissions to 10 ppm and Condition V.A.1 limits the NO<sub>x</sub> emissions to 9 ppm.

SCR systems may use ammonia in a variety of forms. The most common forms are anhydrous ammonia, aqueous ammonia, and urea ((NH<sub>2</sub>)<sub>2</sub>CO). When urea is used, it decomposes in the exhaust stream to form ammonia, which reacts with the NO<sub>x</sub> emissions as it would had the anhydrous or aqueous forms been used. Due to safety concerns with storing ammonia in the offshore environment, BHPB has elected to use urea for the SCR systems onboard the FSRU. The urea will be transported as bagged solid pellets and mixed into an aqueous solution prior to use.

NO<sub>x</sub> emissions from units D1 through D8 will be controlled by low NO<sub>x</sub> burners. Low-NO<sub>x</sub> burners may use low excess air combustion, air staging, fuel staging, or combustion product recirculation to reduce the flame temperature or the available oxygen, thus lowering NO<sub>x</sub> formation in the flame. While manufacturer specifications for currently manufactured SCVs are typically in the 40 ppmv range for NO<sub>x</sub> emissions, BHPB has worked with the manufacturer of the proposed SCVs to develop a unit that can achieve 20 ppmv through the use of a low-NO<sub>x</sub> pre-burner system. Condition V.A.1 limits the NO<sub>x</sub> emissions from the SCVs to 20 ppm.

### ***CO, ROC, and Hazardous Air Pollutants (HAPs)***

Emissions of CO, ROC, and HAPs from units D9 through D12 will be controlled by oxidation catalysts. Oxidation catalysts promote the oxidation of hydrocarbon compounds to CO<sub>2</sub> and water as the gas stream passes through the catalyst bed. Unlike SCR, this process takes place without the need to introduce reactants. In general, catalyst systems on gas engines can reduce formaldehyde and acetaldehyde by 80 to 85 percent. Emissions of other organics may be reduced by 30 to 50 percent. The proposed permit limits the emissions of CO and ROC from units D9 through D12 to 20 ppm and 40 ppm, respectively.

### ***Sulfur Dioxide and PM<sub>10</sub>***

A combination of using natural gas and ultra-low sulfur diesel will minimize emissions of SO<sub>2</sub> and PM<sub>10</sub> from the FSRU. Condition V.E.5 limits the sulfur content of the natural gas to 1 ppmv, and the sulfur content of all diesel fuel is limited to 15 ppmw by Condition V.E.8. This limit is equivalent to the sulfur content standard under Section 2281, title 13 of the California Code of Regulations.

More detailed estimates of the criteria pollutant and HAP emissions are provided in the following section.

## **3.3 ESTIMATED AIR EMISSIONS**

Details of the following estimates can be found in Appendices A and B of the permit application.<sup>3</sup>

### **3.3.1 Startup Emissions**

Installation and commissioning of the equipment and emission control systems will take place at the shipyard or prior to mooring of the FSRU at its permanent location. However, the FSRU will undergo a 60-day initial startup period, during which the emergency equipment will be tested and preparations will be made for receipt of the first LNG shipment. Because BOG will not be available for operation of the main generator engines for a portion of this period, the engines will operate on diesel fuel to provide power to the FSRU.

Three measures are included in the proposed permit to reduce the emissions from the initial startup period. First, Condition V.E.1 requires that the SCR systems be operational at all times, including during the initial startup period when the main generators are firing on diesel. It is important to note, however, that the SCR catalysts have been sized for operation on BOG, which is representative of normal operation. Second, Condition V.E.6.a requires that the use of diesel fuel to operate the main generators be discontinued as soon as the first LNG shipment is received and BOG service to the FSRU begins, even if this occurs before the end of the 60-day initial startup period. Lastly, Condition

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<sup>3</sup> Appendix A was amended by the applicant on April 7, 2006.

V.E.6.a also limits the use of diesel fuel to two of the three main generators at any given time.

The following table presents the estimated air emissions during the 60-day initial startup period.

<b>Table 3</b> <b>Estimated Emissions During Initial Startup Period</b>								
Quantity	Description	Rating (each)	Fuel	60-Day Emissions, tons				
				NO <sub>x</sub>	ROC	CO	SO <sub>2</sub>	PM <sub>10</sub>
2	Wartsila 9L50DF Generator	8250 KW	CA Diesel	41.8	5.8	4.2	0.1	3.1
2	Emergency Fire Pump / Generator	600 / 4200 KW	CA Diesel	0.5	0.1	0.3	0.0 <sup>4</sup>	0.0
3	Freefall Lifeboat <sup>5</sup>	56 KW	CA Diesel	0.0	0.0	0.0	0.0	0.0
<b>Total Emissions</b>				<b>42.3</b>	<b>5.9</b>	<b>4.5</b>	<b>0.1</b>	<b>3.1</b>

**Notes:**

- FSRU startup commissioning period of 60 days, 24 hrs/day, SCR on 9L50DF generators
- The 9L50DF generators will operate at 75% load for 1440 hours on diesel fuel
- Emergency fire pump and generator operating at 100% load for 16 hours each on diesel fuel, 2006 Tier 2 standards
- Three Life Boats exercising at 100% load for 8 machine hours total, diesel fuel, 2006 Tier 2 standards

### 3.3.2 Normal Operations

The following tables present the estimated annual air emissions of criteria pollutants, ammonia, and HAPs from normal operation of the equipment onboard the FSRU. These estimates are based on the following assumptions:

- FSRU throughput of 800 MMcf/day, 365 days/year.
- Operation of the Wartsila 9L50DF generators at 100% load for a total of 26,280 machine hours on 99% gaseous fuel and 1% diesel fuel (by weight) to stabilize combustion.
- Operation of the Wartsila 9L50DF generators at 100% load on diesel fuel for a total of 100 machine hours per year.
- Operation of four SCVs at 100% load for 35,040 machine hours per year.
- Operation of units D13 through D16 at 100% load for 100 hours each per year; 2006 Tier 2 standards.
- Operation of three life boats at 100% load on diesel fuel for a total of 50 machine hours per year.
- The throughput of the diesel storage tank is based on diesel fuel usage defined above for applicable devices.

<sup>4</sup> The SO<sub>2</sub> emission rate from the emergency fire pumps will be 0.3 ppm

<sup>5</sup> The emission rates (in ppm) from the lifeboats will be as follows: NO<sub>x</sub>: 324, ROC: 143, CO: 410, SO<sub>2</sub>: 0.3, PM<sub>10</sub>: 0.0167.

- Air pollution control devices will be in operation whenever the equipment is in operation.
- Natural gas will be the primary fuel for normal operations (as noted above, units D9 through D12 will combust approximately 1% diesel fuel by weight).
- The sulfur content of all diesel fuel is limited to 15 ppmw.
- LNG higher heating value of about 1,007.6 MMBTU/MMft<sup>3</sup>.

Table 4 Estimated Criteria Pollutant and Ammonia Emissions from Equipment Onboard the FSRU									
Qty.	Description	Rating (each)	Fuel	Annual Emissions (tpy)					
				NO <sub>x</sub>	ROC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NH <sub>3</sub>
3	Wartsila 9L50DF Main Generators	8250 KW	BOG / CA Diesel	12.23	24.45	20.78	0.08	8.09	6.01
1	Wartsila 9L50DF Backup Generator	8250 KW	CA Diesel	1.93	0.27	0.20	0.01	0.14	0.05
8	Submerged Combustion Vaporizers	115 mm BTU/hr	BOG Only	48.93	3.49	148.90	0.33	3.80	-
1	Emergency Generator	4200 KW	CA Diesel	2.59	0.37	1.62	0.003	0.09	-
3	Firewater Pumps	600 KW	CA Diesel	0.37	0.05	0.23	0.00	0.01	-
3	Freefall Lifeboat	56 KW	CA Diesel	0.02	0.00	0.02	0.00	0.00	-
1	Diesel Fuel Storage Tank	145,000 gallons	CA Diesel	-	0.03	-	-	-	-
Total Emissions (tpy)				66.07	28.66	171.75	0.42	12.13	6.06

Table 5 Estimated HAP Emissions from Equipment Onboard the FSRU							
HAP	Main Generators (lbs/yr)	Backup Generator (lbs/yr)	SCVs (lbs/yr)	Emergency Generator (lbs/yr)	Life Boat (lbs/yr)	Diesel Tank (lbs/yr)	Total (tons/yr)
Acetaldehyde	2,013	0.05	12	0.11	0.02	--	1.01
Acrolein	1,238	0.02	11	0.03	0.00	--	0.62
Benzene	230	3.35	8	3.23	0.03	0.1	0.12
Butadiene - 1,3	139	0.17	--	0.16	0.00	--	0.07
Ethyl Benzene	21	--	28	--	--	--	0.02
Formaldehyde	12,717	0.16	300	0.33	0.04	--	6.51
Hexane	579	--	18	--	--	--	0.30
Naphthalene	39	0.56	2	0.54	0.00	--	0.02
PAHs	14	0.35	0	0.34	0.00	--	0.01
Propylene		12.03	2,120	11.63	0.08	--	1.07
Toluene	213	1.21	14	1.17	0.01	0.3	0.11
Xylenes	96	0.83	79	0.80	0.01	0.3	0.09
Total HAPS							9.96

### 3.3.3 Marine Vessels

The following tables summarize the emissions that will be generated from operation of the support vessels in state and federal waters.

<b>Table 6</b>								
<b>Vessel Emissions in District Waters</b>								
<b>Quantity</b>	<b>Description</b>	<b>Rating (each)</b>	<b>Fuel</b>	<b>Annual Emissions (tpy)</b>				
				<b>NO<sub>x</sub></b>	<b>ROC</b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
2	Tug/Supply Boat	15,000 BHP Mains	Gasified LNG & CA Diesel	0.26	0.10	0.37	0.000	0.01
1	Crew Boat	1,500 BHP Mains	Gasified LNG	0.31	0.06	0.29	0.000	0.01
<b>Total Emissions</b>				<b>0.57</b>	<b>0.16</b>	<b>0.66</b>	<b>0.000<sup>6</sup></b>	<b>0.02</b>

**Notes:**

- Tug/Supply boat making 52 round trips to FSRU per year, time & load weighted engine operation
- Crew boat making 182 round trips to FSRU per year, time & load weighted engine operation
- Tug/Supply dual fuel is 99% gasified LNG / 1% CA Diesel by weight
- Operating component in state waters only (inside 3-mile limit)

<b>Table 7</b>								
<b>Vessel Emissions in Federal Waters</b>								
<b>Quantity</b>	<b>Description</b>	<b>Rating (each)</b>	<b>Fuel</b>	<b>Annual Emissions (tpy)</b>				
				<b>NO<sub>x</sub></b>	<b>ROC</b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
2	Tug/Supply Boat	15,000 BHP Mains	Gasified LNG & CA Diesel	33.3	12.7	47.1	0.02	1.6
1	Crew Boat	1,500 BHP Mains	Gasified LNG	1.5	0.3	1.4	0.00 <sup>7</sup>	0.0
1	LNG Carrier	60,000 BHP Total	Gasified LNG & CA Diesel	61.9	8.4	40.0	0.01	0.8
<b>Total Emissions</b>				<b>96.7</b>	<b>21.4</b>	<b>88.5</b>	<b>0.03</b>	<b>2.4</b>

**Notes:**

- Assist tugs (pair) conducting LNG carrier to FSRU berthing operations 130 times per year, time & load weighted engine operation
- Tug Supply boat making 52 round trips to FSRU per year, time & load weighted engine operation
- Crew boat making 182 round trips to FSRU per year, time & load weighted engine operation
- LNG carrier to FSRU berthing operations, 14 miles slow, 3 miles to FSRU with assist tugs, time & load weighted engine operation
- LNG Carrier & Tug Supply dual fuel is 99% gasified LNG / 1% CA diesel by weight
- Crew boat is 100% gasified LNG
- Operating component in federal waters only (outside 3-mile limit)

<sup>6</sup> The SO<sub>2</sub> emission rate from the tug/supply and the crew boat main engines will be 0.03 ppmv.

<sup>7</sup> The SO<sub>2</sub> emission rate from the crew boat will be 1 lb/year.

## **4.0 REGULATORY ANALYSIS**

### **4.1 AIR PERMITTING AUTHORITY**

The DPA was enacted in 1975 (P.L. 93-627, §§ 3, 88 Stat. 2127). In 2002, it was amended by the Maritime Transportation Security Act to apply to natural gas ports or terminals and is now codified at 33 U.S.C. 1501 -1524. The DPA defines a “deepwater port” as “any fixed or floating manmade structure other than a vessel, or any group of such structures, that are located beyond State seaward boundaries and that are used or intended for use as a port or terminal for the transportation, storage, or further handling of oil or natural gas for transportation to any State...” A deepwater port includes all components and equipment, including pipelines, pumping or compressor stations, service platforms, buoys, mooring lines, and similar facilities that are proposed or approved for construction and operation as part of a deepwater port, to the extent that they are located seaward of the high water mark and do not include interconnecting facilities. The FSRU will be a manmade floating structure located beyond State seaward boundaries and its intended use will be to receive, store, and process LNG for the transportation of natural gas into the state of California. Consequently, Cabrillo Port is considered a deepwater port for the purposes of the DPA. See 33 U.S.C. § 1502(9).

The Constitution, laws, and treaties of the United States apply to deepwater ports, and to activities connected, associated, or potentially interfering with the use or operation of any such port, in the same manner as if such port were an area of exclusive Federal jurisdiction located within a State. See 33 U.S.C. § 1518(a)(1). Construction and operation of a deepwater port requires compliance with all applicable Federal and State environmental statutes, including the Clean Air Act (CAA). See 33 CFR 148.737. Important provisions of the CAA include regulation of criteria pollutants and HAPs, standards of performance for new stationary sources, and the requirement that each state have a state implementation plan (SIP) for the attainment and maintenance of the national primary and secondary ambient air quality standards. Additional provisions central to the CAA are requirements that new sources apply for, and obtain, permits to construct before starting construction.

In addition to the CAA requirements cited above, the DPA states that the applicable state laws of the nearest adjacent coastal state are to be administered and enforced by appropriate federal officials. Therefore, applicable laws of California apply to Cabrillo Port to the extent such law is applicable and not inconsistent with any provision or regulation under the DPA or other Federal laws and regulations. See 33 U.S.C. § 1518(b). The state of California has created local air pollution districts and pursuant to California Health & Safety Code, Division 26, Part 3, each district establishes and enforces local air pollution regulations in order to attain and maintain all state and federal ambient air quality standards. The districts permit and control emissions from stationary sources of air pollution. To apply the applicable law of California with respect to air pollution therefore requires a determination of the appropriate air pollution control district.

The air district that has jurisdiction over Ventura County is the Ventura County Air Pollution Control District (VCAPCD or District). To the south, south-east of the VCAPCD is the South Coast Air Pollution Control District. To the north, north-west of the VCAPCD is the Santa Barbara Air Pollution Control District (see Figure 4). EPA has determined that

VCAPCD is the air pollution control district whose seaward boundaries, if extended beyond 3 miles, would encompass Cabrillo Port. In addition, the pipeline from the FSRU will reach landfall and connect to an onshore metering station within Ventura County.

Accordingly, for this proposed project, EPA has determined that the VCAPCD portion of the California SIP contains the applicable air permitting regulations of the nearest adjacent coastal State. After considering the requirements of the DPA and the CAA, and the location of the proposed source and its potential to impact onshore air quality, EPA has determined that application of the District's permitting rules which are incorporated into the California SIP to Cabrillo Port is generally consistent with the DPA and the CAA.

**Figure 4: Location of Air Pollution Control Districts**



## **4.2 PERMITS REQUIRED BY VCAPCD RULES**

### **4.2.1 Authority to Construct**

District Rule 10 sets forth the requirements for obtaining preconstruction permits. Specifically, the rule states that “A person shall not build, erect, install, modify, relocate or replace any emissions unit at a stationary source without first obtaining an Authority to Construct. An Authority to Construct shall be required for any new emissions unit, modified emissions unit, relocated emissions unit, or replacement emissions unit. An Authority to Construct shall also be required for any physical change to an emissions unit which may alter the emissions of air contaminants.” Under the DPA, a deepwater port is considered a “new source” for purposes of the CAA. See 33 U.S.C. § 1502(9)(D). As such, Cabrillo Port requires an Authority to Construct (ATC) pursuant to Rule 10 prior to commencement of construction. The draft permit represents that ATC.

#### ***Permit Contents***

Paragraph A(3) of Rule 10 sets forth the requirements for the contents of ATCs issued under that rule. Specifically, it states that the following information and restrictions shall be included in the permit:

1. A description of the emissions units for which the ATC is being issued;

2. A statement that the granting of the ATC shall not be construed as an endorsement by the APCD or guarantee compliance with APCD Rules and Regulations; and
3. Any reasonable conditions determined by the APCO (EPA in this case) pursuant to Rule 29 to be necessary to assure or demonstrate that the stationary source will operate in compliance with applicable federal, state and local rules and regulations. These conditions may include, but shall not be limited to, any applicable requirement(s) to perform source testing, apply for a Permit to Operate or obtain emission reduction credits.

Thus in determining the appropriate contents of an ATC issued pursuant to Rule 10, one must also look to Rule 29.

SIP Rule 29 places conditions on permits to ensure that they assure compliance with state and federal rules, limit the amount of air contaminants a stationary source may emit, and are federally enforceable. Two important provisions of Rule 29 include the following:

- (A)(1) The APCO shall apply any reasonable conditions to an Authority to Construct or a Permit to Operate which are necessary to assure or demonstrate that a stationary source and all emissions units at the stationary source will operate in compliance with applicable state and federal emission standards and with these Rules, including permit conditions required by Rule 26, New Source Review.
- (B)(1) The APCO shall apply conditions to permits which will limit the amount of air contaminants a stationary source may emit. These emission limits are called permitted emissions and shall be expressed in pounds per hour and tons per year. In addition, conditions may include restrictions on production rates, fuel use rates, raw material use rates, hours of operation or other reasonable conditions to insure that the permitted emission limits are not exceeded.

Both of these provisions serve as the basis for numerous requirements in the draft permit, including the hourly and annual emission limits in Conditions V.A and V.B, and many of the operational limits in Condition V.E. The applicability of Rule 26 and the New Source Review requirements is discussed in Section 4.3 below.

### ***Permit Term***

Paragraph (A)(4) of Rule 10 states that ATCs shall expire and shall be cancelled two years from the date of issuance or when a Permit to Operate or Temporary Permit to Operate is granted or denied, whichever comes first, unless an extension has been approved in writing by the APCO. The term of the permit and its expiration are addressed in Section XII of the permit. Condition XII.A of the draft permit is consistent with paragraph (A)(4) in that it states the permit shall expire two years

from the date of issuance or when a Permit to Operate or Temporary Permit to Operate is granted or denied, whichever comes first, unless the owner or operator has either obtained a written extension from EPA. However, the permit language states that the permit will not expire if the owner or operator has commenced construction and does not stop construction for more than 18 months.

EPA has considered how to apply the substantive requirements of Rule 10(A)(4) in a manner which makes the Rule consistent with the Deepwater Port Act. For the typical project granted a preconstruction air permit in VCAPCD, a two (or four) year time period is generally sufficient for an applicant to construct the emissions unit and obtain an annual permit to operate, or temporary permit to operate, as required by the VCAPCD rules. However, even if BHPB obtains a deepwater port license and commences construction in a timely fashion and does not stop construction for more than 18 months, Cabrillo Port is not expected to commence operation until calendar year 2011 – more than five years from the Applicant's December 2005 submission of its revised permit application. The FSRU will be constructed outside of the United States, and the commissioning of the equipment and control systems will be performed at the shipyard or prior to the mooring of the FSRU in its permanent location. Thus, while construction of the FSRU may commence significantly earlier, it may not be moved into position until 2011.

The idea that the ATC would lapse in two years (or four if an extension were granted) when the permit applicant has not delayed the project is inconsistent with the DPA and the CAA. Section 1503(h) of the DPA (33 U.S.C. §1503(h)) states that a deepwater port license issued under the DPA remains in effect unless suspended or revoked by the Secretary or until surrendered by the licensee. Preconstruction permits issued under the CAA (to major sources) remain in effect unless construction is not commenced within 18 months or construction is halted for more than 18 consecutive months. While the permit being issued is neither a license nor a major source preconstruction permit, a requirement for complete construction of the project in only two years is at odds with the project being permitted under the DPA license process. The Agency considers the two year period to be a process requirement rather than a substantive requirement and thus drafted the language of the permit so that it is consistent with the federal process.

The substantive requirements regarding the expiration of ATCs under Rule 10 can be found in the terms for obtaining an extension. In particular, Rule 10(A)(4) states that an extension may be granted in the following cases:

- a. Where the APCO determines that the applicable Best Available Control Technology (BACT) requirements that are in effect on the expiration date are not more stringent than the BACT requirements that were originally imposed.
- b. Where the APCO determines, based on an analysis submitted by the applicant, that the more stringent BACT requirements in effect on the expiration date are not cost effective based on current APCD cost effectiveness guidelines, taking

into consideration expenditures already made in addition to additional expenditures needed to comply with current BACT.

If the applicant requests an extension, that request will be evaluated against the requirements of Rule 10(A)(4) and the other applicable requirements in effect at the time. However, as discussed in Section 4.3.3 below, Cabrillo Port is currently not subject to the BACT provisions of Rule 26.2. As a result, EPA does not expect this procedural modification to have any effect on the substantive requirements of the rule.

#### **4.2.2 Permit to Operate**

ATCs issued pursuant to the District's SIP approved permitting program do not authorize operation of newly constructed stationary sources. Pursuant to Rule 10(B)(1), an owner or operator must first obtain a Permit to Operate before operating any emission unit at a stationary source. Specifically, the rule states, "A person shall not operate, use or offer for use any emissions unit at a stationary source without first obtaining a Permit to Operate or a revised Permit to Operate, which lists such emissions unit in its current configuration." Prior to operating the equipment onboard the FSRU, BHPB will be required to obtain a Permit to Operate pursuant to this rule; the requirement to obtain such a permit is reflected in Condition XII.B of the draft permit.

#### **4.2.3 Title V Operating Permit**

Pursuant to sections 501(2)(B) and 302(j) of the CAA, a "major source" under the title V program is one that directly emits or has the potential to emit, 100 tpy or more of any air pollutant. With permitted CO emissions of 169 tpy, Cabrillo Port will exceed the title V major source threshold and will be required to obtain a title V permit. Because the proposed project is not subject to any title V requirements prior to the start of operations, EPA is not proposing to issue a title V permit at this time. Pursuant to section 503(c) of the CAA, owners or operators of sources that must obtain title V permits are required to submit a permit application within 12 months of beginning operation, or such earlier date as the permitting authority may establish. The requirement for BHPB to apply for a title V permit is reflected in Condition XII.C of the draft permit. The title V operating permit will contain all the conditions included in the final ATC and will have additional requirements specifically associated with title V operating permits. For example, it will include requirements for:

- Submittal of annual certifications regarding compliance with the permit conditions and plans contained in the title V application, and
- Annual fee payment, based on actual emissions.

## **4.3 NEW SOURCE REVIEW**

### **4.3.1 Program Overview**

The CAA requires each state to have a SIP for the attainment and maintenance of the national primary and secondary ambient air quality standards. Section 110 of the Act requires that each SIP include a program to regulate the construction and modification of any stationary source within the area covered by the plan as necessary to assure that the National Ambient Air Quality Standards (NAAQS) are achieved and maintained. Pursuant to this requirement, the owners or operators of stationary sources of air pollution must obtain air permits prior to commencing construction of new sources or making modifications to existing sources. The process by which these permits are obtained is called New Source Review (NSR).

The overall NSR program is divided into three separate permitting programs – Prevention of Significant Deterioration (PSD), nonattainment NSR, and minor source NSR. The PSD program applies to new major sources and major modifications at existing sources for pollutants where the area is in attainment with or is unclassifiable with respect to the NAAQS. Nonattainment NSR applies to new major sources or major modifications at existing sources for pollutants where the area is not in attainment with the NAAQS. Minor NSR is for pollutants from stationary sources that do not require PSD or nonattainment NSR permits.

The purpose of minor NSR permits is to prevent the construction of sources that would interfere with attainment or maintenance of the NAAQS or violate a control strategy. States are able to customize the requirements of their minor NSR programs as long as they meet certain minimum requirements. The VCAPCD's minor source program is implemented through Rule 10, which requires an Authority to Construct for any new emissions unit, modified emissions unit, relocated emissions unit, or replacement emissions unit; and Rule 26, which contains NSR requirements for both minor and major sources of air pollution.

The permitting programs for major sources are the PSD program and nonattainment NSR program. The permitting program that applies to a source depends on the attainment status of the area in which the source is located. Because designations are made on a pollutant-specific basis, a source may simultaneously be in an attainment area for one pollutant and a nonattainment area for another. Each program has different requirements and different thresholds (in terms of a facility's annual emissions) at which they become applicable. The major source threshold (i.e., the emission rate at which the program becomes applicable to the source) for the PSD program is either 100 tons per year or 250 tons per year, depending on the type of the source. The major source threshold for the nonattainment NSR program varies depending on the severity of nonattainment in a given area.

#### **4.3.2 Attainment Status of the Project Site**

Section 107(d) of the CAA requires that areas within a state be designated as either attainment, nonattainment, or unclassifiable with respect to the NAAQS on a pollutant-specific basis. Attainment designations are given to areas within a state that meet the NAAQS for a given pollutant. Nonattainment designations are given to areas within a state that either do not meet the NAAQS or that contribute to ambient air quality in a nearby area that does not meet the NAAQS. Unclassifiable areas are those areas within a state that cannot be classified on the basis of available information as meeting or not meeting the NAAQS. All parts of the state of California have been given one of these designations. See 40 CFR 81.305.

As discussed in Section 4.1 above, applying the applicable air pollution law of California requires a determination of the appropriate air pollution control district, and EPA has determined that the VCAPCD is the appropriate air pollution control district. Within the VCAPCD, the on-shore areas of Ventura County and areas within three miles of the mainland shoreline are classified as moderate nonattainment with respect to the 8-hour ozone standard (See 69 Fed. Reg. 23858) and as attainment with respect to the CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub> standards. Also under the jurisdiction of the VCAPCD are two islands off the coast of California that are part of Ventura County – Anacapa Island and San Nicolas Island. These islands and a three-mile band around each of them are designated as attainment/unclassifiable under the federal standards.

BHPB proposes to locate Cabrillo Port approximately 14 miles off the coast of mainland Ventura County, CA. Because this location is more than three miles from the mainland or any of the Channel Islands, the facility will not lie within the federally recognized boundaries of the state of California. Generally, the CAA does not require EPA to make air quality designations for areas that are outside of state boundaries. As a result, the portions of the Pacific Ocean that are beyond the federally-recognized boundary of the state of California, including the proposed location of the FSRU, have not been designated. As noted above, the Deepwater Port Act states that the laws of the "nearest adjacent coastal state" shall apply to a deepwater port, to the extent such laws are "applicable" and "not inconsistent" with federal law. See 33 U.S.C. § 1518(b). The statute does not, however, specify how requirements that differ from place to place within the relevant state should be applied. Accordingly, EPA found it necessary to determine – after determining that the VCAPCD portion of the California SIP contains the applicable air permitting regulations – whether the attainment area or nonattainment area requirements of the VCAPCD should be applied to the FSRU. EPA considered factors such as the location of the FSRU in relation to the Channel Islands and the mainland of Ventura County, the current uses of the Channel Islands, and the amount of emissions and the air quality impact to be expected from the stationary source. As a result of this consideration, EPA proposes to permit Cabrillo Port in the same manner as sources in the federal attainment area would be permitted (i.e., in the same manner as sources on the Channel Islands).

#### **4.3.3 Applicability of SIP Rule 26.2**

SIP Rule 26, which includes Rules 26 through 26.11, specifies the New Source Review provisions that are applicable to new, replacement, modified or relocated emissions units in Ventura County. Among these provisions are the requirements of Rule 26.2 pertaining to the application of BACT and the provision of offsets. In particular, Rule 26.2(A) requires that any new, replacement, modified, or relocated emissions unit that has a potential to emit ROC, NO<sub>x</sub>, PM<sub>10</sub>, or SO<sub>x</sub> be equipped with the current BACT for the pollutants. Rule 26.2(B) requires that emissions increases of ROC, NO<sub>x</sub>, PM<sub>10</sub>, or SO<sub>x</sub> associated with any new, replacement, modified or relocated emissions be offset with emission reduction credits. In general the BACT requirements apply to new, replacement, modified, or relocated emission units of any size and the offset requirements apply to projects where the potential to emit of the stationary source would be greater than or equal to certain limits specified in the rule. Exemptions from these requirements are provided in Rule 26.3. One exemption is for sources located in the attainment area of Ventura County on Anacapa Island or San Nicolas Island. See SIP Rule 26.3(A)(2). Because EPA is permitting the FSRU in the same manner as sources in the federal attainment area, the emission units onboard the FSRU are not subject to the provisions of Rule 26.2. However, as previously discussed, BHPB has committed to using emissions controls consistent with a BACT analysis submitted with the permit application.

#### **4.3.4 Applicability of the PSD Program**

SIP Rule 26.10 sets forth the following requirements with respect to the PSD program:

*The requirements of Title 40 Code Federal Regulations (CFR) 52.21, Prevention of Significant Deterioration of Air Quality, shall apply to the following:*

- A. Any new major source, as defined in 40 CFR 52.21(b)(1), which would emit a pollutant in an area which is in attainment with the federal ambient air quality standards for such pollutant.*
- B. Any major modification, as defined in 40 CFR 52.21(b)(2), which would cause the emission of a pollutant in an area which is in attainment with the federal ambient air quality standards for such pollutant.*

*Any source that is subject to this rule is required to obtain separate permits from both the District and the U.S. Environmental Protection Agency.*

The proposed permit is being issued pursuant to SIP Rule 10, which requires ATCs for new sources of air pollution. Pursuant to the requirements of Rules 10 and 29, and in accordance with the permit application and commitments made by the applicant, the permit contains numerous conditions to limit the emissions from the facility. Such conditions include V.E.1, which requires the use of SCR systems and low NO<sub>x</sub> burners for NO<sub>x</sub> control; V.A.2, which places annual limits on the NO<sub>x</sub> and CO emissions from all permitted sources onboard the FSRU; and V.B.7 which places annual limits on the ROC, PM<sub>10</sub> and SO<sub>2</sub> emissions from all permitted sources. These limits are summarized

in the Table 8 below. Operational restrictions and monitoring requirements are included in the permit to ensure compliance with these federally enforceable limits on the facility's potential to emit.

<b>Table 8</b>					
<b>Annual Emission Limits</b>					
	<b>Pollutant</b>				
	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>ROC</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
<b>Limit (tpy)</b>	66.05	171.73	28.66	0.42	12.13

The PSD regulations under 40 CFR 52.21 define a "major source" as any source type belonging to a list of 28 source categories which emits or has the potential to emit 100 tpy or more of any pollutant regulated under the CAA, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tpy (40 CFR 52.21(b)). Among the source categories listed under 40 CFR 52.21(b)(1) are "fuel conversion plants." In a memorandum signed on July 31, 2003, EPA discussed whether the classification of "fuel conversion plants" applies to off-shore gas delivery systems that vaporize LNG for delivery to a downstream infrastructure. Based on the legislative history on the issue and prior EPA guidance, the Agency concluded that the process of vaporizing LNG to natural gas at these sources does not qualify them as "fuel conversion plants" under the federal PSD rules. As a result, the proposed FSRU is not within the 28 source categories listed under 40 CFR 52.21 (b)(1); therefore, its PSD threshold is 250 tpy. The conditions limiting the facility's annual emissions will ensure the emissions stay well below these thresholds. As a result, the FSRU is not subject to PSD requirements.

#### **4.4 NEW SOURCE PERFORMANCE STANDARDS**

The New Source Performance Standards (NSPS) of 40 CFR Part 60 apply to new, reconstructed, or modified equipment used in specific source categories. The following table summarizes the NSPS that are potentially applicable to Cabrillo Port.

<b>Table 9</b>	
<b>Potentially Applicable New Source Performance Standards<sup>8</sup></b>	
<b>Units</b>	<b>NSPS</b>
D17 – diesel fuel storage tank	Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
LNG storage tanks	
D1 through D8 – SCVs	Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

<sup>8</sup> This table summarizes current NSPS that are potentially applicable to the source. On July 11, 2005, EPA proposed a rule containing performance standards for new stationary compression ignition internal combustion engines. At such a time when this rule is made final, EPA will assess its applicability with respect to the equipment onboard the FSRU and amend the permit at an appropriate time as necessary.

#### 4.4.1 Applicability of NSPS Subpart Kb

NSPS Subpart Kb (40 CFR 60.110b – 60.117b) applies to vessels that store volatile organic liquids and that were constructed, reconstructed, or modified after July 23, 1984. Pursuant to 60.110b(a), affected facilities are storage vessels with a capacity greater than or equal to 40 m<sup>3</sup> (10,567 gallons). Unit D17 is a storage tank with a capacity of 144,500 gallons and could therefore potentially be subject to the regulation. Section 60.110b goes on to list several exemptions for various types of sources and for sources with certain parameters. In particular, paragraph 60.110b(c) provides an exemption from the provisions of the subpart (except as specified in paragraphs (a) and (b) of 60.116b) based on the volume of the vessel and the vapor pressure of its contents. Vessels that have a capacity greater than 151 m<sup>3</sup> (39,890 gallons) and that store a liquid with a maximum true vapor pressure less than 3.5 kPa (0.5 psia) fall in the exempt category. Unit D17 will be used to store diesel fuel, which has a relatively low vapor pressure. The approximate temperature at which the vapor pressure of diesel equals 0.5 psia is 230° F. Under normal storage conditions, the temperature of the diesel fuel will be significantly lower than that. As a result, the storage tank is exempt from Subpart Kb and the General Provisions (Subpart A) pursuant to Section 60.110b(c). As noted above, the exemption does not apply to paragraphs (a) and (b) of Section 60.116b. Section 60.116b(b) requires that the owner or operator of the vessel maintain records showing the dimensions and capacity of the vessel and section 60.116b(a) requires these records be kept for the lifetime of the vessel. These requirements are reflected in Condition VI.D.1.q of the draft permit.

Section 60.111b defines a *volatile organic liquid* as “any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere. 40 CFR 51.100(s)(1) excludes methane from the definition of volatile organic compound. As a result, the LNG storage tanks do not store volatile organic liquids and are therefore not affected facilities for the purposes of NSPS Subpart Kb. The same is true for District rules that regulate ROC.

#### 4.4.2 Applicability of NSPS Subpart Db

40 CFR 60.40b(a) states that an affected facility for the purposes of NSPS Subpart Db is a steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity of greater than 100 MMBtu/hr. The SCVs have a heat input of 115 MMBtu/hr and could therefore potentially fall within the definition of an affected facility. In determining whether or not the regulation applies, it is necessary to consider whether the SCVs are steam generating units as defined by the NSPS.

Section 60.41b defines a *steam generating unit* as:

*a device that combusts any fuel or byproduct/ waste to produce steam or to heat water or any other heat transfer medium. This term includes any municipal- type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a*

*combined cycle system. This term does not include process heaters as they are defined in this subpart.*

While the SCVs do not produce steam, they do combust fuel to heat a transfer medium (i.e., water). Based on this fact, one could reasonably classify the SCVs as steam generating units. However, EPA has previously provided guidance on the definition of a steam generating unit which leads to the conclusion that the definition does not extend to the SCVs. In particular, a November 17, 1992 memo from Bruce Jordan states the following:

*The key to distinguishing between a steam generating unit and a process dryer or kiln, however, is the method of heat transfer between the combustion gases and the heat transfer medium (if a heat transfer medium is involved). In a steam generating unit there is a physical barrier between the combustion gases and the heat transfer medium (e.g., the waterwall or tubes in the steam generating unit). Thus, there is no direct contact or intermixing of the combustion gases and the heat transfer medium.*

*As a result, devices which combust fuel and transfer heat from the combustion gases to a heat transfer medium across a physical barrier which prevents direct contact or intermixing of the combustion gases and the heat transfer medium are considered steam generating units under Subparts Db and Dc. Devices which either (1) combust fuel but do not transfer heat from the combustion gases to a heat transfer medium or (2) transfer heat to heat transfer medium by direct contact or intermixing of the combustion gases and the heat transfer medium are not considered steam generating units under Subparts Db and Dc.*

Because the SCVs are designed to have direct contact and intermixing of the combustion gasses and the heat transfer medium, they are not considered steam generating units under Subpart Db and are therefore not subject to the regulation. It is worth noting that BHPB is proposing to use low NO<sub>x</sub> burners in the SCVs that achieve an emission rate of 0.0243 lb/MMBtu, which is significantly lower than the most stringent NO<sub>x</sub> limit of 0.1 lb/MMBtu in the regulation.

## **4.5 CHEMICAL ACCIDENT PREVENTION**

Under CAA Section 112(r), Congress granted EPA authority to address chemical accidents by various means. These means include the development and enforcement of regulations to prevent accidental releases of listed substances as well as oversight of the statutorily-imposed "general duty" to prevent accidental releases and minimize the consequences of such releases. See 40 CFR Part 68 (regulations); CAA 112(r)(1) (general duty). As discussed in a memorandum dated March 6, 2006, by EPA's General Counsel, the provisions of section 112(r) do not apply to storage incident to transportation, which includes LNG and natural gas off-loading and storage at offshore

terminals.<sup>9</sup> Listed substances or other extremely hazardous substances present at liquefied natural gas facilities that are not in transportation or storage incident to transportation (e.g., ammonia stored for use at such a facility) would be subject to the general duty and may become subject to 40 CFR part 68 if held in quantities that exceed regulatory thresholds.

## **4.6 VCAPCD RULES**

As discussed above, the DPA states that the applicable state laws of the nearest adjacent coastal state are to be administered and enforced by appropriate federal officials and EPA has determined that the VCAPCD portion of the California SIP contains the applicable air permitting regulations. The rules listed below are applicable to Cabrillo Port and most serve as the basis for one or more permit conditions. The sections that follow discuss various streamlining, monitoring, and recordkeeping issues as they relate to these rules. The applicability of rules that EPA has concluded do not apply to Cabrillo Port is also discussed below. Rule 26 is discussed in Section 4.3 above.

- Rule 10 – Permits Required
- Rule 19 – Posting of Permits
- Rule 20 – Transfer of Permit
- Rule 24 – Source Recordkeeping, Reporting and Emission Statements
- Rule 26 – New Source Review
- Rule 29 – Conditions on Permits
- Rule 32 – Breakdown Conditions
- Rule 50 – Opacity
- Rule 51 – Nuisance
- Rule 54 – Sulfur Compounds
- Rule 57.1 – Particulate Matter Emissions From Fuel Burning Equipment
- Rule 64 – Sulfur Content of Fuels
- Rule 68 – Carbon Monoxide
- Rule 74.2 – Architectural Coatings
- Rule 74.6 – Surface Cleaning and Degreasing
- Rule 74.9 – Stationary Internal Combustion Engines
- Rule 101 – Sampling and Testing Facilities
- Rule 102 – Source Tests
- Rule 103 – Continuous Monitoring Systems

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<sup>9</sup> Memorandum, Ann R. Klee, General Counsel, to Granta Nakayama, Assistant Administrator, Office of Enforcement and Compliance Assistance, and Susan Bodine, Assistant Administrator, Office of Solid Waste and Emergency Response, “Applicability of Clean Air Act Section 112(r)(1) General Duty Clause and Section 112(r)(7) Risk Management Program to Liquefied Natural Gas Facilities” (March 6, 2006).

#### 4.6.1 Rule 54 – Sulfur Compounds

Rule 54 limits the concentration of sulfur compounds in discharges to the atmosphere. The following table summarizes the requirements of the rule that are applicable to Cabrillo Port:

<b>Table 10</b> <b>Summary of Emission Limits From Rule 54 Applicable to Cabrillo Port</b>		
<b>Pollutant</b>	<b>Rule Reference</b>	<b>Limit</b>
SO <sub>2</sub>	54(B)(1)(a)	300 ppmv at the point of discharge
	54(B)(2)	0.25 ppmv at any point at or beyond the property line, over a 1 hour average
		0.04 ppmv at any point at or beyond the property line, over a 24 hour average
H <sub>2</sub> S	54(B)(3)	10 ppmv at the point of discharge
	54(B)(4)	0.06 ppmv at any point at or beyond the property line, over a 3 minute average
		0.03 ppmv at any point at or beyond the property line, over a 1 hour average

Units D1 through D8 will use natural gas exclusively and units D9 through D12 will use natural gas as the primary fuel. Pursuant to Condition V.E.5 of the draft permit, the sulfur content of the BOG used to fire these units is limited to 1 ppmv. As a result of the low sulfur content of the fuel, the emissions of sulfur compounds from these sources will be extremely low. According to the permit application, burning natural gas in the main generators results in a stack gas concentration of 0.30 ppmv SO<sub>2</sub> and nondetectible H<sub>2</sub>S. Similarly, the stack gas concentration from the SCVs will be at 0.1 ppmv and nondetectible H<sub>2</sub>S. Beyond monitoring the sulfur content of the BOG (as required by Condition VI.B.6), no additional monitoring is necessary to demonstrate compliance with these limits for units D1 through D12.

The emergency generator, firewater pumps, lifeboats, and dual fuel backup generator (at times) will operate on ultra-low sulfur diesel fuel with a sulfur content of 15 ppmw. Again, as a result of the low sulfur content of the fuel, the sulfur emissions at the point of discharge from these sources will be very low and well within the limits of Rule 54. All of these sources will produce maximum stack gas concentrations of 0.29 ppmv SO<sub>2</sub> and nondetectible H<sub>2</sub>S. Condition V.E.8 limits the sulfur content of all diesel fuel used to 15 ppmw and Condition VI.D.1.j requires the Permittee to maintain records demonstrating compliance with that limit; no further monitoring beyond these requirements is necessary to demonstrate compliance with the limits of Rule 54(B)(1)(a) and 54(B)(3) for these sources.

As a result of the low sulfur content of the fuel, and the low sulfur emissions at the point of discharge from these sources, the concentrations at or beyond the fenceline will also be very low and well within the limits of Rule 54. The applicant conducted a modeling

analysis to document the impacts that the proposed project will have on air quality. As part of that analysis, BHP modeled the maximum offshore impacts for several pollutants, including SO<sub>2</sub> (App. J, Table 1-2). As documented in an April 14 submittal by BHPB to supplement its application, this modeling also supports that the SO<sub>2</sub> emissions from the proposed project will not exceed either of the applicable property line limits in the rule. The H<sub>2</sub>S limits at the property line will also not be exceeded since H<sub>2</sub>S will not be emitted at detectable levels. Condition VI.D.1.e requires BHPB to maintain a modeling analysis for SO<sub>2</sub> that demonstrates compliance with the rule should the emissions from the project change in the future.

#### **4.6.2 Rule 64 – Sulfur Content of Fuels**

Rule 64 prohibits the burning of gaseous fuel with a sulfur content of more than 50 grains per hundred cubic feet (788 ppmv) and limits the emissions from the combustion of liquid fuel to levels equal to the uncontrolled combustion fuel with a sulfur content of 0.5% by weight. Because the sulfur content limits imposed on the BOG and diesel fuel by Conditions V.E.5 and V.E.8 are significantly more stringent than the limits of Rule 64, the specific limits of the rule are not included in the draft permit. Compliance with these limits will be assured by Conditions VI.B.6 and VI.D.1.j as discussed above.

#### **4.6.3 Rule 74.9 – Stationary Internal Combustion Engines**

##### **4.6.3.1 Applicability**

Rule 74.9 applies to stationary internal combustion engines that are rated at 50 or more horsepower, operated on gaseous or diesel fuel, and are not subject to Rule 74.16 (Oilfield Drilling Operations). Because all of the engines onboard the FSRU are more than 50 horsepower, they are all potentially subject to the requirements of the rule. The applicability of this rule is discussed below for each type of engine.

##### ***Main Generator Engines***

Units D9 through D12 will be dual-fueled and have the ability to operate on natural gas and diesel fuel. Natural gas will be the primary fuel during normal operations and diesel fuel will be used on a limited basis during normal operations and the initial startup period. Rule 74.9 contains separate emission standards for lean burn engines and those fired on diesel fuel. Therefore, two standards potentially apply to these units.

Section D of the rule contains several exemptions; among them is one for diesel engines operated on San Nicolas Island and Anacapa Island. This exemption was adopted by the District on November 14, 2000 and submitted for approval into the SIP on May 8, 2001. In approving the exemption into the SIP on October 25, 2002, EPA found that the exemption was not inconsistent with the CAA (particularly Section 110(l), which prohibits SIP revisions from interfering with any applicable requirement concerning attainment and reasonable further progress) because the

VCAPCD federal ozone nonattainment area does not include San Nicolas Island and Anacapa Island in the 1994/1995 ozone Air Quality Management Plan. As a result, EPA concluded that approval of the exemption into the SIP would not interfere with the requirements concerning attainment of the ozone NAAQS. As previously discussed in section 4.3.2, EPA is permitting Cabrillo Port in the same manner as sources in the federal attainment area would be permitted (i.e., in the same manner as sources on the Channel Islands). Consistent with this determination, and pursuant to Rule 74.9(D)(10), the engines are exempt from the provisions of the rule while operating on diesel, including during the initial startup period and backup operation (limited to 100 hours per year).<sup>10</sup> Because the exemption explicitly applies to diesel engines, units D9 through D12 will not be exempt from the requirements of the rule while operating on natural gas.

### ***Emergency Engines***

While the emergency generator engine and three firewater pump engines will operate solely on diesel, BHPB's application indicates that the intended use of the engines is for emergency purposes. Consistent with BHPB's treatment of the engines as emergency standby engines, EPA is permitting them in such a manner for the purposes of Rule 74.9.

Among the exemptions in Section D of Rule 74.9 is one for emergency standby engines whose operation for maintenance purposes is limited to 50 hours per year. Section I of the rule defines an emergency standby engine as "An internal combustion engine used only as follows: 1) when normal power line or natural gas service fails. 2) for the emergency pumping of water for either fire protection or flood relief." Conditions V.E.6 and V.E.9 of the proposed permit limit these engines to such use and include the requisite 50-hour limitation for maintenance purposes. As a result of these conditions and the exemption in Rule 74.9(D)(3), Units D13 through D16 are not subject to the emission limits of this rule. Monitoring and recordkeeping requirements have been added to the permit pursuant to EPA's authority under Rule 29 to verify that the engines are operated in accordance with the exemption.

#### **4.6.3.2 Applicable Requirements**

Rule 74.9 contains emission limits for NO<sub>x</sub>, CO, ROC, and ammonia, which are applicable to units D9 through D12 while operating on natural gas. The following table compares the limits of the rule with the limits imposed on the engines pursuant to EPA's authority under Rule 29.

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<sup>10</sup> It should be noted that this exemption has little relevance with respect to the actual emissions from the units because the limits proposed by the applicant are generally more stringent than the limits of the rule.

<b>Table 11 Comparison of Rule 74.9 and Permitted Emission Limits</b>		
<b>Pollutant</b>	<b>Rule 74.9 (ppmv)</b>	<b>Permit (ppmv)</b>
<b>NO<sub>x</sub></b>	45	9
<b>CO<sup>11</sup></b>	4500	20
<b>ROC</b>	750	40
<b>Ammonia</b>	20	10

As demonstrated in the table above, compliance with the permit limits assures compliance with the limits of the rule. As a result, the limits of Rule 74.9 are not directly cited in the permit. The permit does, however, contain other requirements specified in the rule, including the requirement to prepare and submit an Engine Operator Inspection Plan. It should be noted that one requirement not included in the permit is the requirement under paragraph (b)(5) of the District (non-SIP) rule, which requires screening analyses for NO<sub>x</sub> and CO emissions on a quarterly basis. This requirement was not included in the permit because the emissions will be continuously monitored by the CEMS, which provide data at a greater frequency than the rule requires. In addition, the units will be source tested on an annual basis during the Relative Accuracy Test Audits. The compliance methods required by the permit will provide much better compliance data than quarterly analyses using a portable handheld device.

#### **4.6.4 Rule 29 – Conditions On Permits**

As discussed above, paragraphs (A)(1) and (B)(1) of Rule 29 provide EPA with the authority to apply conditions to permits that will limit the amount of air contaminants a stationary source may emit and that are necessary to assure compliance with all applicable requirements. These provisions serve as the basis for numerous conditions in the draft permit including many of the operational limits in Section V.E. The following sections provide the rationale for conditions imposed under the authority of Rule 29 that warrant discussion.

##### **4.6.4.1 BOG Use**

In its application, BHPB indicated that while the FSRU will have eight SCVs, only an equivalent of four of the SCVs at 100 percent loading will be operating at any one time. Condition V.E.3 limits the total flow rate of BOG to units D1 through D8 to 456.53 mcf/hr to provide an enforceable means of restricting operation of the SCVs and limiting the emissions to the permitted levels. This limit is based on the following data:

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<sup>11</sup> The cited limits are from the rule as adopted by the VCAPCD on November 14, 2000 and approved into the SIP on October 25, 2002. Rule 74.9 was subsequently revised and adopted by the District on November 8, 2005 but has not been added to the SIP. Paragraph (B)(1)(a) of the revised rule limits CO emissions from any engine installed after November 8, 2005 to 2000 ppmv. The limits proposed in the permit are more stringent than this requirement.

Higher Heating Value:	1007.6 MMBtu/MMcf
Unit Rating:	115.000 MMBtu/hr
Number of Devices:	4
Total Heat Input:	460.00 MMBtu/hr

$$\text{BOG use} = 460.00 \frac{\text{MMBtu}}{\text{hr}} \times \frac{1}{1,007.6 \frac{\text{MMBtu}}{\text{MMcf}}} = 456.53 \frac{\text{mcf}}{\text{hr}}$$

#### 4.6.4.2 Operational Parameters for Routine Startup Events

The SCR technology used for controlling NO<sub>x</sub> emissions is described in Section 3.2 above. The reactions that convert the NO<sub>x</sub> emissions to nitrogen and water occur on the surface of the catalyst and are dependant upon the catalyst being at a minimum temperature. When combustion equipment is shut down for an extended period of time, the catalyst can cool sufficiently so that when the equipment is started again, the emissions are not immediately reduced to the maximum extent allowed by the design of the system. Recognizing this, the permit contains provisions for a 1-hour period in which the lb/hr and ppmv emission limits will not apply following startup of the equipment. To ensure that the emissions are reduced the greatest extent possible during routine startups, Condition V.E.10 requires that urea injection be initiated immediately after the SCR catalyst temperature reaches 650° F, which is the minimum temperature at which most SCR catalysts become effective.<sup>12</sup>

#### 4.6.5 VCAPCD Rules Not Applicable to Cabrillo Port

The VCAPCD has adopted numerous prohibitory rules that regulate certain pollutants, equipment, industries, and operations. Many of them clearly do not apply to Cabrillo Port because the proposed port does not contain the regulated substance or activity. However, the applicability of some rules is not readily apparent. The following sections discuss potentially applicable District rules that EPA has concluded do not apply to Cabrillo Port.

##### 4.6.5.1 Rule 71.2 – Storage of Reactive Organic Compound Liquids

Section (A) of Rule 71.2 states:

*The provisions of this rule shall apply to equipment used to store crude oil or reactive organic compound (ROC) liquids with a modified Reid vapor pressure greater than 0.5 psia. The provisions of this rule shall not apply to any storage equipment subject to Rule 71.1, to any gasoline storage container with a capacity*

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<sup>12</sup> BHPB has not yet selected a specific catalyst type or manufacturer and therefore can not confirm that 650 degrees will be the minimum temperature at which the catalyst becomes effective. This condition may be modified in the future if it is found to be inconsistent with the specifications for the catalyst that is selected.

*equal to or less than 40,000 gallons, or to any other storage container with a capacity equal to or less than 5,000 gallons.*

Because the diesel fuel storage tank has a capacity of 144,500 gallons and diesel fuel meets the definition of a reactive organic compound, the tank could potentially be subject to the requirements of the rule. However, as discussed above (also see Attachment 1 of Rule 71.2) the temperature at which the vapor pressure of diesel fuel exceeds 0.5 psia is 230° F. The temperature of the diesel fuel in the tank will be significantly lower than this under normal storage conditions. As a result, the tank is not subject to Rule 71.2.

#### **4.6.5.2 Rule 71.3 – Transfer of Reactive Organic Compound Liquids**

Section (A) of Rule 71.3 states:

*The provisions of this rule shall apply to equipment used to transfer reactive organic compound (ROC) liquids with a Modified Reid Vapor Pressure (MRVP) greater than or equal to 0.5 psia. The provisions of this rule shall not apply to the transfer of gasoline or the transfer of ROC liquids via pipeline.*

Again, because the vapor pressure of diesel fuel is below 0.5 psia under the conditions that will exist on the FSRU, the storage tank is not subject to this rule.

#### **4.6.5.3 Rule 74.27 – Gasoline and ROC Liquid Storage Tank Degassing Operations**

Section (A) of Rule 74.27 states:

*Effective 3/31/95, this rule shall apply to:*

- 1. Any gasoline storage tank that has a storage capacity greater than 5,000 gallons, and*
- 2. Any storage tank that has a storage capacity greater than 5,000 gallons that stores a reactive organic compound (ROC) liquid, excluding petroleum liquids, having a true vapor pressure equal to or greater than that determined by:*

*$TVP_{68oF} (psia) = 2.3 + 23,000/V$ , where  $V$  is the volume of the tank in gallons.*

In this case, the applicability of the rule is based on the second paragraph, which sets the applicability threshold for the vapor pressure according to the specified equation. Using the volume of the proposed diesel fuel storage tank, this equation yields the following result:

$$\text{TVP } 68^{\circ} \text{ F} = 2.3 + \frac{23,000}{144,500 \text{ gallons}} = 2.5 \text{ psia}$$

At 68° F the vapor pressure of diesel fuel is approximately 0.1 psia, which is below the threshold determined by the equation. Therefore, the diesel fuel storage tank is not subject to Rule 74.27.

## **5.0 AIR QUALITY IMPACTS**

### **5.1 AIR QUALITY IMPACT ANALYSIS**

Although an air quality impact analysis is not required for sources exempt from the requirements of Rule 26.2, the applicant conducted a modeling analysis to document the impacts that the proposed project will have on air quality. The air quality impact report is provided in Appendix J of the permit application.

### **5.2 AIR QUALITY IMPROVEMENT PROJECTS**

In addition to using stationary source control technologies that are consistent with its BACT analysis, BHPB also committed in its June 7, 2005 letter to take measures to reduce the emissions from the marine support vessels and implement projects to enhance air quality.

#### ***Support Vessels***

With respect to the support vessels, BHPB committed to:

- 1) operate the LNG carriers on natural gas while in US waters, and
- 2) operate the supply/crew vessels and tugs on natural gas in both federal and state waters.

Use of natural gas to operate these vessels has significant emissions benefits, especially compared to the traditional use of bunker fuel to operate large ships.

In addition to the commitment to use natural gas in its vessels made to EPA in the June 7, 2005 letter, BHPB stated in an April 11, 2006 letter that it proposed to use extremely low emitting engines in Cabrillo Port's two dedicated tugs in addition to the use of natural gas as vessel fuel as CEQA mitigation for the vessel emissions in federal waters.

#### ***Additional Air Quality Improvement Projects***

As documented in the June 7, 2005 letter, BHPB's original plans for onshore air quality improvement projects involved conversion of 45 diesel fueled garbage trucks in Ventura County to operate on natural gas. BHPB is unable to implement this project at the present time. However, in letters dated April 21 and April 11, 2006, BHPB reiterated its commitment to achieve emissions reductions up to an amount

equal to the facility's annual NOx emissions and stated that it has executed contracts to retrofit two marine vessels (long haul tugs) by replacing two propulsion engines and two auxiliary engines with modern low emitting engines (Tier 2 compliant diesel fired engines). BHPB currently estimates that the repowering of one Sause Brothers tug could result in emission reductions of approximately 123 tons per year of NOx, and the repowering of one Olympic Tug and Barge tug could result in emission reductions of approximately 96 tons per year. However, EPA has not yet completed its own analysis of the emission reductions to be expected from retrofitting these marine vessel engines.

## **6.0 ADDITIONAL REQUIREMENTS**

In the Deepwater Port licensing process for the Cabrillo Port, the Coast Guard and MARAD have assumed lead agency responsibilities for consulting with other Federal and State agencies under various Federal laws protecting the environment, natural resources, and cultural resources, including the Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, Coastal Zone Management Act, and National Historic Preservation Act. The Coast Guard and MARAD have generally integrated the analysis and consultation required under these statutes with the National Environmental Policy Act review of the project in accordance with 40 C.F.R. § 1502.25.

In October 2004 the Coast Guard/MARAD and the CSLC issued a draft environmental impact statement (EIS)/environmental impact report (EIR) including preliminary consultation documents and findings regarding the project's anticipated impacts. In March, 2006 the CSLC issued a revised DEIR.

EPA expects that the project-wide scope of the combined NEPA process and related consultations, once they are completed, will be broad enough to include consideration of effects that might be attributed to EPA's permit action, and EPA is thus relying on them for compliance with the federal laws at issue. Therefore, although EPA actions under the CAA are statutorily exempt from NEPA review, final issuance of this permit will depend on satisfactory completion of the consultation. If the nature of the proposed facility changes as a result of future review and licensing decisions, the applicant may be required to submit a request for permit modification. Final issuance of this permit will, however, depend on satisfactory completion of the consultation process.

None of the consultations completed to date has identified significant issues related to air quality (except emissions increases related to onshore construction activities). Nor have the consultations resulted in any conclusion by the Coast Guard/MARAD that the project would result in unacceptable environmental impacts. Additional information regarding consultations under the Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act follows.

## **6.1 ENDANGERED SPECIES ACT**

Pursuant to Section 7 of the Endangered Species Act (ESA), 16 U.S.C. § 1536, and its implementing regulations at 50 C.F.R. Part 402, EPA is required to ensure that any action authorized, funded, or carried out by the Agency is not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of such species' designated critical habitat. When a federal action involves more than one Federal agency, consultation responsibilities under Section 7 of the ESA may be fulfilled through a lead agency pursuant to 50 C.F.R. § 402.07. In the deepwater port licensing process for Cabrillo Port, the Coast Guard is the lead agency for purposes of NEPA review of the project in accordance with 40 C.F.R. § 1502.25. In the course of its review, the Coast Guard generally integrated the analysis and consultation required under the ESA into the EIS required by NEPA. In the spring of 2004, the Coast Guard informed the National Oceanic and Atmospheric Administration (NOAA) and the US Fish and Wildlife Service (FWS) about this project, and received guidance on December 20, 2005, on how to proceed with its obligations under the ESA. EPA is relying on this consultation and coordination with NOAA and the FWS to impose any requirements associated with mitigation and/or take that may be necessary as reflected in the Record of Decision (ROD) for the deepwater port license signed by the Secretary of Transportation. Because EPA is relying on the Coast Guard's consultation with NOAA and the FWS, EPA will not issue the final ATC prior to issuance of the ROD.

## **6.2 MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT**

Pursuant to section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens), Federal agencies are required to consult with the Secretary of Commerce (delegated to the National Marine Fisheries Service, or NOAA Fisheries) with respect to "any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act." In addition, the Magnuson-Stevens Act also provides that the Secretary of Commerce "shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat." In an April 27, 2004 letter the Coast Guard solicited comments from NOAA Fisheries, and stated that it did not believe the Cabrillo Port Facility would have an adverse impact on essential fish habitat (EFH) and did not believe an EFH consultation was required. The CSLC Draft EIR, which is being prepared in conjunction with the Coast Guard's EIS, sets out specific mitigation measures and finds that the potential for the project to affect EFH is less than significant.

## **7.0 CONCLUSION AND PROPOSED ACTION**

Based on the information supplied by BHPB, EPA proposes to issue a permit for the construction of Cabrillo Port. Pursuant to Rule 26.7 of the Ventura County portion of the California SIP, public notice must be given of any preliminary decision to grant an ATC for any new, replacement, modified, or relocated emissions unit where the potential to

emit from all new, modified, replacement, or relocated emissions units at the stationary source, which are covered by the application for such ATC, would exceed the limits specified in Table B-1 of the rule. Such notice was provided on May 4, 2006 in the Los Angeles Times, Ventura County Star, Ventura County Reporter, and the Malibu times. These notices began the start of a 60-day period during which EPA will accept public comments on the proposed action. Comments may be submitted in writing at any time during the public comment period or they may be submitted verbally at the public hearing scheduled for Monday, June 5, 2006 at the Oxnard Performing Arts & Convention Center in Oxnard, CA. At the close of the public comment period, EPA will consider all comments received and will make a final decision on the issuance of the permit. EPA's final decision is reviewable under Section 307(b)(1) of the Clean Air Act in the Ninth Circuit Court of Appeals. A petition for review must be filed within 60 days of such decision.

## **8.0 REFERENCES**

The following materials related to this project are available online at <http://www.epa.gov/region09/liq-natl-gas/index.html>. Additional materials are available in the administrative record for the proposed permit, which is available for public viewing at the EPA Region 9 office in San Francisco, CA. Please call 415-947-4200 to make arrangements if you wish to view the administrative record.

### **Materials Originated by Applicant**

- Letter to Amy Zimpfer, EPA (April 21, 2006)
- Letter to Margaret Alkon, EPA, with attachment (April 14, 2006)
- Letter to Amy Zimpfer, EPA (April 11, 2006)
- Letter to Bob Fletcher, California Air Resources Board, with attachments (April 11, 2006)
- Letter to Margaret Alkon, EPA, with attachments (April 7, 2006)
- Letter to Amy Zimpfer, EPA (June 7, 2005)
- Application for Minor New Source Review Permit, as amended and clarified by submissions on April 21, 14, 11, and 7, 2006; and June 7, 2005 (December, 2005)

### **Materials Originated by EPA**

- Memorandum from Ann Klee to Granta Nakayama (March 6, 2006)
- Letter to Mark Prescott, Coast Guard, in response to September 30, 2005 letter from US Coast Guard (November 3, 2005)
- Letter to Mark Prescott, Coast Guard (June 29, 2005)
- Letter to Thomas Wood, Stoel Rives LLP for BHP (March 30, 2005)
- Letter to Steve R. Meheen, BHP, in response to June 1, 2004 letter from Hollister & Brace on behalf of BHP (June 29, 2004)
- Letter to Mike Villegas, VCAPCD (May 27, 2004)
- Letter to Steve R. Meheen BHP (April 5, 2004)
- Memorandum from Bruce Jordan to EPA Regions (November 17, 1992)

#### Materials Originated by US Coast Guard

- Letter to Amy Zimpfer, EPA (September 30, 2005)

#### Materials Originated by VCAPCD

- Letter to Gerardo Rios, EPA (June 18, 2004)

#### Laws, Rules, and Regulations

- Deepwater Port Act, 33 U.S.C. 1501 et. seq.
- Clean Air Act, 44 U.S.C. 7401 et. seq.
- EPA regulations contained in Title 40 of the Code of Federal Regulations
- VCAPCD SIP Rules
- VCAPCD Local Rules